Figure 1. SEM micrographs of insulin-loaded AcHES-PLGA composite microspheres (a), interior structure of a fractured microsphere (b, arrows point to embedded AcHES microparticles) and freeze dried AcHES hydrogel microparticles (c).

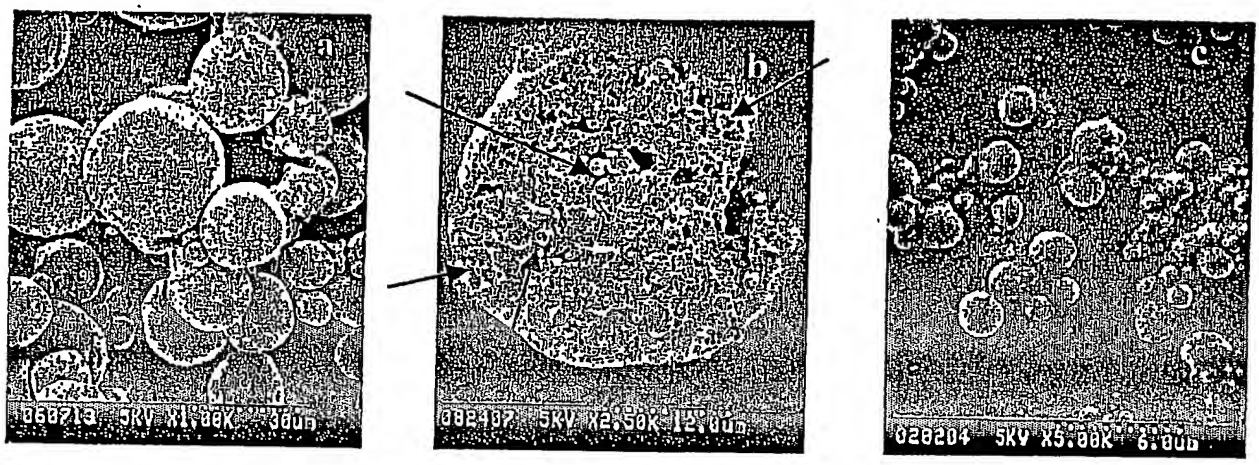

Figure 2. HPLC chromatogram of insulin sample isolated from composite microspheres by ACN extraction and intact insulin standard.

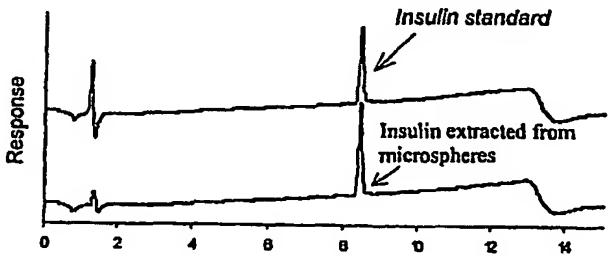

Figure 3. Characterization of insulin integrity in the composite microspehres (a) SDS-PAGE with DTT. Lane1, Molecular weight marker; Lane 2, Bovine insulin standard; Lane 3, insulin sample from BI021 and lane 4, insulin sample from BI022. (b) MALDI-TOF MS of insulin extracted from composite in comparison to intact standard.

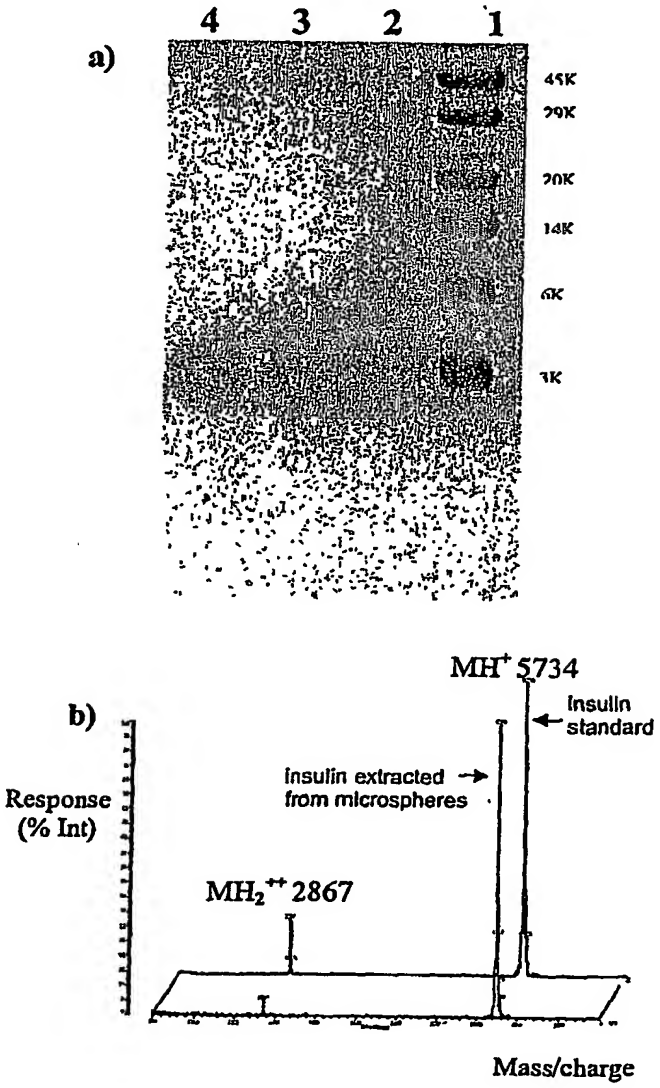

Figure 4. In vitro release of insulin from composite microspheres in glycine buffer at 37°C. Sonication levels are indicated in ( ).

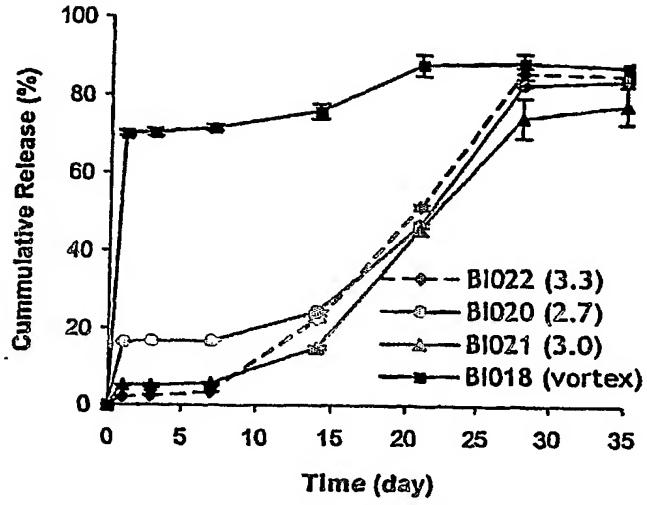

Figure 5. Serum glucose suppression in diabetic rats treated with insulin loaded composite microsphere batches BI021 (a) and BI022 (b).

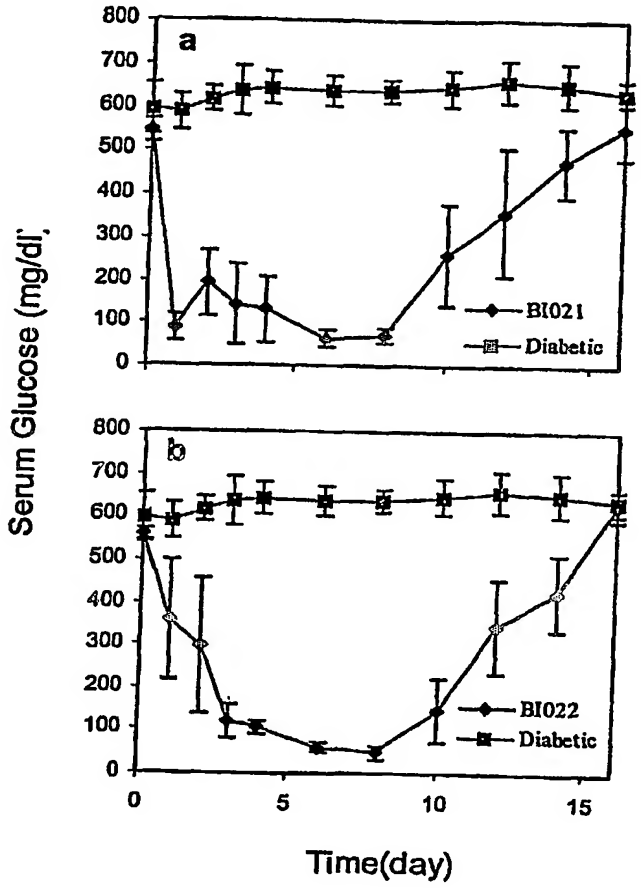

Figure 6. Serum Insulin level of (a) BI021 and (b) BI022 treated diabetic rats.

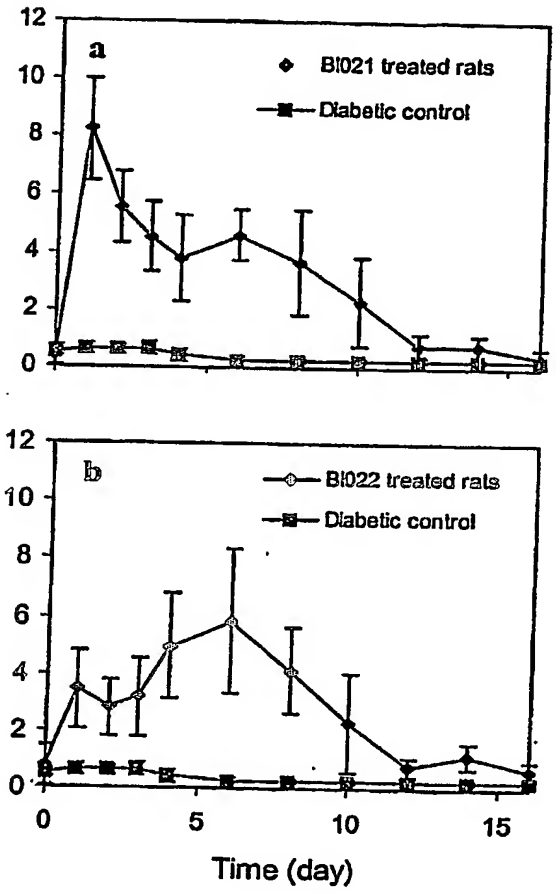

Figure 7. Blood glucose suppression of multiple dosing treatment of insulin loaded composite microspheres (n=8, Dose 80 IU/rat).

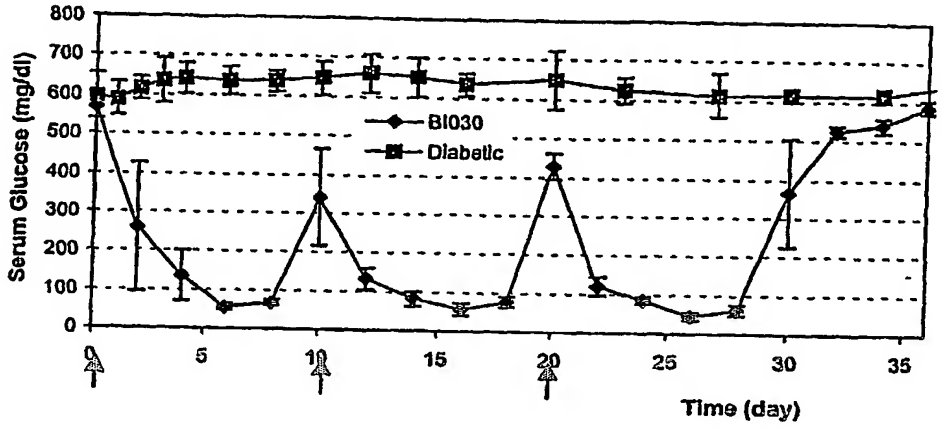

Figure 8. Serum insulin level of multiple dosing treatment of insulin loaded composite microspheres (n=8, Dose 80 IU/rat).